Datasheet for ABIN3093432

PKD2 Protein (AA 1-878) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	PKD2
Protein Characteristics:	AA 1-878
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PKD2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MATAPSYPAG LPGSPGPGSP PPPGGLELQS PPPLLPQIPA PGSGVSFHIQ IGLTREFVLL PAASELAHVK QLACSIVDQK FPECGFYGLY DKILLFKHDP TSANLLQLVR SSGDIQEGDL VEVVLSASAT FEDFQIRPHA LTVHSYRAPA FCDHCGEMLF GLVRQGLKCD GCGLNYHKRC AFSIPNNCSG ARKRRLSSTS LASGHSVRLG TSESLPCTAE ELSRSTTELL PRRPPSSSSS SSASSYTGRP IELDKMLLSK VKVPHTFLIH SYTRPTVCQA CKKLLKGLFR QGLQCKDCKF NCHKRCATRV PNDCLGEALI NGDVPMEEAT DFSEADKSAL MDESEDSGVI PGSHSENALH ASEEEEGEGG KAQSSLGYIP LMRVVQSVRH TTRKSSTTLR EGWVVHYSNK DTLRKRHYWR LDCKCITLFQ NNTTNRYYKE IPLSEILTVE SAQNFSLVPP GTNPHCFEIV TANATYFVGE MPGGTPGGPS GQGAEAARGW ETAIRQALMP VILQDAPSAP GHAPHRQASL SISVSNSQIQ ENVDIATVYQ IFPDEVLGSG QFGVVYGGKH RKTGRDVAVK VIDKLRFPTK QESQLRNEVA ILQSLRHPGI VNLECMFETP EKVFVVMEKL HGDMLEMILS SEKGRLPERL TKFLITQILV ALRHLHFKNI VHCDLKPENV LLASADPFPQ VKLCDFGFAR IIGEKSFRRS VVGTPAYLAP

EVLLNQGYNR SLDMWSVGVI MYVSLSGTFP FNEDEDINDQ IQNAAFMYPA SPWSHISAGA IDLINNLLQV KMRKRYSVDK SLSHPWLQEY QTWLDLRELE GKMGERYITH ESDDARWEQF AAEHPLPGSG LPTDRDLGGA CPPQDHDMQG LAERISVL

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Product Details

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	PKD2
Alternative Name:	PRKD2 (PKD2 Products)
Background:	Serine/threonine-protein kinase D2 (EC 2.7.11.13) (nPKC-D2),FUNCTION: Serine/threonine-protein kinase that converts transient diacylglycerol (DAG) signals into prolonged physiological effects downstream of PKC, and is involved in the regulation of cell proliferation via MAPK1/3 (ERK1/2) signaling, oxidative stress-induced NF-kappa-B activation, inhibition of HDAC7 transcriptional repression, signaling downstream of T-cell antigen receptor (TCR) and cytokine production, and plays a role in Golgi membrane trafficking, angiogenesis, secretory granule release and cell adhesion (PubMed:15604256, PubMed:14743217, PubMed:17077180, PubMed:16928771, PubMed:17962809, PubMed:17951978, PubMed:18262756, PubMed:19192391, PubMed:19001381, PubMed:23503467, PubMed:28428613). May potentiate mitogenesis induced by the neuropeptide bombesin by mediating an increase in the duration of MAPK1/3 (ERK1/2) signaling, which leads to accumulation of immediate-early gene products including FOS that stimulate cell cycle progression (By similarity). In response to oxidative stress, is phosphorylated at Tyr-438 and Tyr-717 by ABL1, which leads to the activation of PRKD2 without increasing its catalytic activity, and mediates activation of NF-kappa-B (PubMed:15604256, PubMed:28428613). In response to the activation of the gastrin receptor CCKBR, is phosphorylated at Ser-244 by CSNK1D and CSNK1E, translocates to the nucleus, phosphorylates HDAC7, leading to nuclear export of HDAC7 and inhibition of HDAC7 transcriptional repression of NR4A1/NUR77 (PubMed:17962809). Upon TCR stimulation, is activated independently of ZAP70, translocates from the cytoplasm to the nucleus and is required for interleukin-2 (IL2) promoter up-regulation (PubMed:17077180). During adaptive

Target Details

	immune responses, is required in peripheral T-lymphocytes for the production of the effector cytokines IL2 and IFNG after TCR engagement and for optimal induction of antibody responses to antigens (By similarity). In epithelial cells stimulated with lysophosphatidic acid (LPA), is activated through a PKC-dependent pathway and mediates LPA-stimulated interleukin-8 (IL8) secretion via a NF-kappa-B-dependent pathway (PubMed:16928771). During TCR-induced T-cell activation, interacts with and is activated by the tyrosine kinase LCK, which results in the activation of the NFAT transcription factors (PubMed:19192391). In the trans-Golgi network (TGN), regulates the fission of transport vesicles that are on their way to the plasma membrane and in polarized cells is involved in the transport of proteins from the TGN to the basolateral membrane (PubMed:14743217). Plays an important role in endothelial cell proliferation and migration prior to angiogenesis, partly through modulation of the expression of KDR/VEGFR2 and FGFR1, two key growth factor receptors involved in angiogenesis (PubMed:19001381). In secretory pathway, is required for the release of chromogranin-A (CHGA)-containing secretory granules from the TGN (PubMed:18262756). Downstream of PRKCA, plays important roles in angiotensin-2-induced monocyte adhesion to endothelial cells (PubMed:17951978). Plays a regulatory role in angiogenesis and tumor growth by phosphorylating a downstream mediator CIB1 isoform 2, resulting in vascular endothelial growth factor A (VEGFA) secretion (PubMed:23503467). {ECO:0000250|UniProtKB:Q8BZ03, ECO:0000269|PubMed:14743217, ECO:0000269|PubMed:15604256, ECO:0000269|PubMed:16928771, ECO:0000269|PubMed:17077180, ECO:0000269|PubMed:17951978, ECO:0000269|PubMed:17962809, ECO:0000269|PubMed:18262756, ECO:0000269|PubMed:19001381, ECO:0000269|PubMed:19192391, ECO:0000269|PubMed:23503467, ECO:0000269|PubMed:28428613}.
Molecular Weight:	96.7 kDa
UniProt:	Q9BZL6
Pathways:	cAMP Metabolic Process, Maintenance of Protein Location, Negative Regulation of Transporter Activity

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce

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	even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

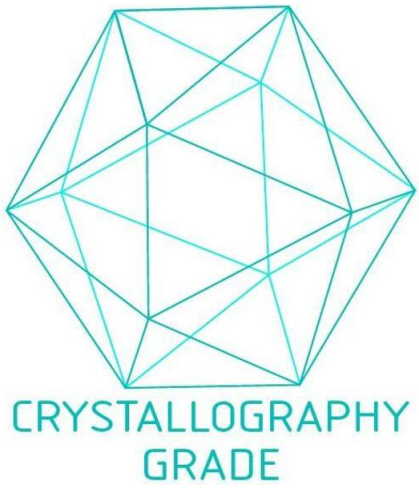

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process